

CLAIMS

WHAT IS CLAIMED IS:

- 1 1. A process for forming a drag reducing agent slurry comprising:
2 forming a polyalphaolefin; and
3 mixing the polyalphaolefin with at least one alfol alcohol.
- 1 2. The process for forming a drag reducing agent slurry of claim 1, wherein the at least one alfol
2 alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl alcohol,
3 n-nonyl alcohol and 1-decanol.
- 1 3. A process for forming a drag reducing agent slurry comprising:
2 contacting alpha olefin monomer with a catalyst in a reactant mixture;
3 polymerizing the alpha olefin monomers, wherein during the polymerization, at least
4 a portion of the alpha olefin monomers polymerize in the reactant mixture to provide a
5 polyalphaolefin;
6 mixing the polyalphaolefin with at least one alfol alcohol.
- 1 4. The process for forming a drag reducing agent slurry of claim 3, wherein the catalyst is a
2 transition metal catalyst.
- 1 5. The process for forming a drag reducing agent slurry of claim 3, wherein the transition metal
2 catalyst is a Ziegler-Natta catalyst.
- 1 6. The process for forming a drag reducing agent slurry of claim 3, wherein the Ziegler-Natta
2 catalyst is titanium trichloride.
- 1 7. The process for forming a drag reducing agent slurry of claim 3, wherein the reactant mixture
2 includes at least one co-catalyst.

- 3 8. The process for forming a drag reducing agent slurry of claim 7, wherein the at least one co-
4 catalyst is selected from the group consisting of alkylaluminoxanes, halohydrocarbons,
5 diethylaluminum chloride, and dibutylaluminum chloride.
- 1 9. The process for forming a drag reducing agent slurry of claim 3, wherein the alpha olefin
2 monomers comprise homopolymers, terpolymers or copolymers.
- 1 10. The process for forming a drag reducing agent slurry of claim 3, wherein the alpha olefin
2 monomers comprise co-polymers of 1-hexene and 1-dodecene alpha olefins or co-polymers of 1-
3 octene and 1-tetradodecene alpha olefins.
- 1 11. The process for forming a drag reducing agent slurry of claim 3, wherein the polyalphaolefin
2 is an ultra-high molecular weight polyalphaolefin having an inherent viscosity of at least about 10
3 deciliters per gram and is amorphous with substantially no crystalline particles.
- 1 12. The process for forming a drag reducing agent slurry of claim 3, further comprising the step
2 of cryogrinding the polyalphaolefin prior to mixing the polyalphaolefin with at least one alfol
3 alcohol.
- 1 13. The process for forming a drag reducing agent slurry of claim 3, wherein the at least one alfol
2 alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl alcohol,
3 n-nonyl alcohol and 1-decanol.
14. A drag reducing agent slurry comprising a polyalphaolefin and at least one alfol alcohol.
- 1 15. The process for forming a drag reducing agent slurry of claim 14, wherein the at least one
2 alfol alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl
3 alcohol, n-nonyl alcohol and 1-decanol.

1 16. A drag reducing agent slurry comprising a polyalphaolefin and at least one alfol alcohol
2 formed by mixing the polyalphaolefin with at least one alfol alcohol.

1 17. The process for forming a drag reducing agent slurry of claim 16, wherein the at least one
2 alfol alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl
3 alcohol, n-nonyl alcohol and 1-decanol.

1 18. A drag reducing agent slurry comprising a polyalphaolefin and at least one alfol alcohol
2 formed by contacting alpha olefin monomers with a catalyst in a reactant mixture;
3 polymerizing the alpha olefin monomers, wherein during the polymerization, at least a
4 portion of the alpha olefin monomers polymerize in the reactant mixture to provide a
5 polyalphaolefin; and
6 mixing the polyalphaolefin with at least one alfol alcohol.

1 19. The process for forming a drag reducing agent slurry of claim 18, wherein the at least one
2 alfol alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl
3 alcohol, n-nonyl alcohol and 1-decanol.

1 20. A process for reducing drag in a conduit, comprising:
2 forming a drag reducing agent slurry comprising a polyalphaolefin and at least one
3 alfol alcohol; and
4 introducing the drag reducing agent slurry into the conduit.

1 21. The process for forming a drag reducing agent slurry of claim 20, wherein the at least one
2 alfol alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl
3 alcohol, n-nonyl alcohol and 1-decanol.

1 22. A process for reducing drag in a conduit, comprising:

forming a drag reducing agent comprising a polyalphaolefin, wherein the drag
reducing agent is formed by contacting alpha olefin monomers with a catalyst
in a reactant mixture;
polymerizing the alpha olefin monomers, wherein during the polymerization, at least
a portion of the alpha olefin monomers polymerize in the reactant mixture to
provide a polyalphaolefin;
mixing the polyalphaolefin with at least one alfol alcohol to form a drag reducing
agent slurry; and
introducing the drag reducing agent slurry into the conduit.

23. The process for forming a drag reducing agent slurry of claim 22, wherein the at least one
alfol alcohol is selected from the group consisting of 1-pentanol, 1-hexanol, 1-heptanol, n-octyl
alcohol, n-nonyl alcohol and 1-decanol.